

**We claim:**

1. A promoter having SEQ ID No.2 for high throughput screening and developing inhibitors of mycobacteria under low carbon or starved conditions.
2. A promoter as claimed in claim 1, wherein promoter is 2.5 folds more active than the conventional  $P_{hsp60}$ (heat shock protein promoter) promoter.
3. An expression system for high-throughput screening and developing inhibitors of mycobacteria under low carbon or starved conditions said system comprising of promoter of 200 bp having SEQ ID No.2 in a vector pSAK12.
4. An expression system as claimed in claim 3, wherein promoter is 2.5 folds more active than the conventional  $P_{hsp60}$ (heat shock protein promoter) promoter
5. An expression system as claimed in claim 3, wherein carbon source, glucose is in the range of about 2.5 to 0.001%.
6. An expression system as claimed in claim 5, wherein carbon source, glucose is in the range of about 2 to 0.02%.
7. An expression system as claimed in claim 3, wherein percentage inhibition growth of mycobacteria in presence of the promoter and in presence of inhibitor ethambutol is reduced in the range of about 6 to 25% in presence of 0.02 % glucose i.e under starved conditions.
8. An expression system as claimed in claim 7, wherein percentage inhibition growth of mycobacteria in presence of the promoter and in presence of inhibitor ethambutol is reduced in the range of about 7 to 21% in presence of 0.02 % glucose i.e under starved conditions.
9. An expression system as claimed in claim 3, wherein percentage inhibition growth of mycobacteria in presence of the promoter and in presence of inhibitor

isoniazide is reduced in the range of about 15 to 45% in presence of 0.02 % glucose i.e under starved conditions.

10. An expression system as claimed in claim 9, wherein percentage inhibition growth of mycobacteria in presence of the promoter and in presence of inhibitor isoniazide is reduced in the range of about 18 to 40 % in presence of 0.02 % glucose i.e under starved conditions.
11. An expression system as claimed in claim 3, wherein percentage inhibition growth of mycobacteria in presence of the promoter and in presence of inhibitor rifampicin is reduced in the range of about 20 to 45% in presence of 0.02 % glucose i.e under starved conditions.
12. An expression system as claimed in claim 12, wherein percentage inhibition growth of mycobacteria in presence of the promoter and in presence of inhibitor rifampicin is reduced in the range of about 21 to 41% in presence of 0.02 % glucose i.e under starved conditions.
13. A method of preparing a promoter expression system for high-throughput screening and developing inhibitors against mycobacteria under low carbon source, said process comprising the steps of:
  - (a) isolating and characterizing a 200 bp promoter sequence having SEQ ID No.2 from nucleotide sequence of 1.5 kb DNA fragment upstream of *M.tuberculosis* gene *relA/spoT*,
  - (b) ligating the isolated promoter sequence of step (a) in vector pSAK12, and
  - (c) studying the expression of the promoter sequence under low carbon source or carbon starved conditions.

14. A process as claimed in claim 13, wherein promoter is 2.5 folds more active than the conventional  $P_{hsp60}$ (heat shock protein promoter) promoter
15. A process as claimed in claim 13, wherein carbon source, glucose is in the range of about 2.5 to 0.001%.
16. A process as claimed in claim 14, wherein carbon source, glucose is in the range of about 2 to 0.02%.
17. A process as claimed in claim 13, wherein percentage inhibition growth of mycobacteria in presence of the promoter and in presence of inhibitor ethambutol is reduced in the range of about 6 to 25% in presence of 0.02 % glucose i.e under starved conditions.
18. A process as claimed in claim 17, wherein percentage inhibition growth of mycobacteria in presence of the promoter and in presence of inhibitor ethambutol is reduced in the range of about 7 to 21% in presence of 0.02 % glucose i.e under starved conditions.
19. A process as claimed in claim 13, wherein percentage inhibition growth of mycobacteria in presence of the promoter and in presence of inhibitor isoniazide is reduced in the range of about 15 to 45% in presence of 0.02 % glucose i.e under starved conditions.
20. A process as claimed in claim 19, wherein percentage inhibition growth of mycobacteria in presence of the promoter and in presence of inhibitor isoniazide is reduced in the range of about 18 to 40 % in presence of 0.02 % glucose i.e under starved conditions.

21. A process as claimed in claim 13, wherein percentage inhibition growth of mycobacteria in presence of the promoter and in presence of inhibitor rifampicin is reduced in the range of about 20 to 45% in presence of 0.02 % glucose i.e under starved conditions.
22. A process as claimed in claim 21, wherein percentage inhibition growth of mycobacteria in presence of the promoter and in presence of inhibitor rifampicin is reduced in the range of about 21 to 41% in presence of 0.02 % glucose i.e under starved conditions.